

DETAILED ACTION

This office action follows a response filed on July 14, 2008. Claims 12 and 13 are pending.

Claim Rejections - 35 USC § 102

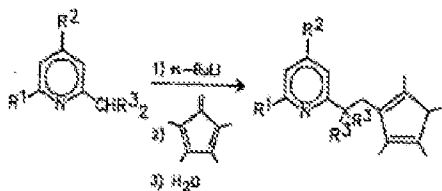
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Jutzi *et al.* (*J. Organomet. Chem.*, 1995, 500, 175-185) for the same reasons set forth in the previous office action dated January 14, 2008.

Scheme 2 on page 182 of Jutzi *et al.*, reproduced below, shows a reaction that satisfies the reaction sequence set forth in the instant claims. Lithiation in the first step results in the formation of $R^1R^2C_4H_2N-C(R^3)_2Li$, which corresponds to “A anion” recited in the instant claims, where A is a substituted heteroaromatic ring system. Note in the claims that the structure of A is not specified, and there is nothing in the claims that indicates that the anion must reside at a specific location on A. The fulvene shown in the reaction scheme corresponds to fulvene (VIIIa) of the claims in which R^{4B} are hydrogen and $R^{1A}-R^{4A}$ are methyl.



Based on this analysis, it is concluded that the subject matter of claim 12 is anticipated by the prior art of Jutzi *et al.*

Allowable Subject Matter

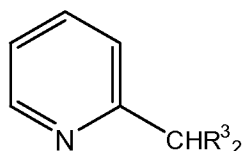
3. The following is a statement of reasons for the indication of allowable subject matter: Claim 13 is drawn to a process for preparing cyclopentadiene systems of formula (VIIa) by reaction of an $A-CR^{2B}R^{2B}$ anion with a cyclopentenone of formula (IX). Mihan *et al.* (WO 01/12641) and Enders *et al.* (*Chem. Ber.*, 1996) disclose preparative methods for preparing ligands 1-(2-(*N,N*-dimethylaminophenyl)-2,3,4,5-tetramethylcyclopentadiene and 1-(8-quinolinyl)-2,3,4,5-tetramethylcyclopentadiene by reaction of tetramethylcyclopentenone with the corresponding heterocyclic anion precursors. In this case, heterocyclic anions do not possess the structure $A-CR^{2B}R^{2B}$, as recited in the instant claims. One of ordinary skill in the art would not have found it obvious to modify the synthetic procedure of the prior art (thereby failing to make the compounds of the prior art) to arrive at the subject matter of the instant claims.

Response to Arguments

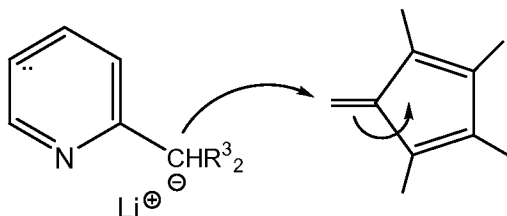
4. Applicant traverses the rejection of claim 12 over Jutzi *et al.* Applicant submits that the reference can not anticipate the instant claim because present claims are drawn to a process of preparing anion containing a single carbon bridge (designated CR^{4B}_2) between A and the cyclopentadienide moiety. It is noted that the anion of Jutzi *et al.* contains a two carbon bridge between the heterocyclic group and the cyclopentadienide moiety. Applicant's arguments have been considered fully, but they are not persuasive.

While the difference between structures of ligands is appreciated, the process shown in the prior art reads directly on the process described in claim 12. Note that in claim 12, A represents an unsubstituted, substituted, or fused heteroaromatic ring system. In this case, the molecule $C_5H_4N-CHR^3_2$ of Jutzi *et al.* is a heteroaromatic ring system containing pyridine substituted in the 2-position with a CHR^3_2 group. This corresponds to "A" of the instant claim.

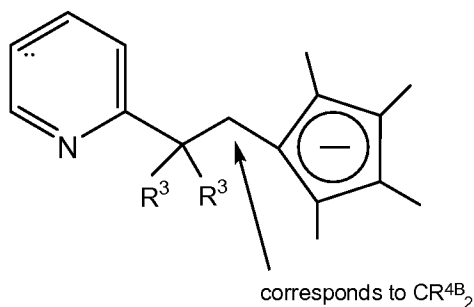
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In the reaction sequence shown in Scheme 2, lithiation at the β -carbon results in formation of the anion of A, which is reacted with fulvene. The fulvene in the scheme corresponds to structure (VIIIa) in which $\text{R}^{4\text{B}}$ are both hydrogen.



The product prior to hydrolysis (*i.e.*, after step 2 of Scheme 2), shown below, corresponds to anion (VII) of the instant claim. Starting fragment $\text{C}_5\text{H}_4\text{N}-\text{CR}^3_2$ is bonded directly to a $\text{CH}_2\text{C}_5\text{Me}_4$ moiety; the methylene group corresponds directly to $\text{CR}^{4\text{B}}_2$.



Even though there are two carbons bridging the pyridine ring and the cyclopentadienide moiety, the process shown in the prior art is the same as that recited in the instant claim. As elucidated previously, instant claim is drawn to a heteroaromatic ring system with no specificity regarding the location of the anion on heteroaromatic ring system with A.

In light of these considerations, the rejection has been maintained.

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Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu S. Jagannathan, can be reached at (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

/Rip A. Lee/
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October 19, 2008

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796

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